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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/522,120

06/17/2005

Donald G. Wind

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EXAMINER

HEINCER, LIAM J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/522,120	Applicant(s) WIND ET AL.	
	Examiner Liam J. Heincer	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/15/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-18, 21-25, and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swarup et al. (US Pat. 6,087,464).

Considering Claim 1: Swarup et al. teaches a coating composition (2:15-18) comprising an alkyd resin with a polydispersity of greater than 1/less than 2 (11:34-41) that is the reaction product of a polyester component (13:38-42) and a fatty acid component (13:53-65) that is preferably saturated (13:65-67); and a amino resin crosslinker (14:34-39).

Swarup et al. teaches a polydispersity greater than 1. This overlaps with the claimed range of less than about 2. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2144.05.

The Office realizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. the color stability, would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Considering Claims 2-4, 29, and 30: The Office realizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredients. Therefore, the claimed effects and physical properties, i.e. the change in the b color component or the flexibility, would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with only the claimed ingredients.

Considering Claims 5 and 6: Swarup et al. teaches the coating composition as having a VOC content of less than 2.0 lbs/gal/0.25 kg/L (7:4-20).

Considering Claims 7 and 8: Swarup et al. teaches the alkyd resin being present in an amount of 15 to about 75 weight percent of the composition (4:11-14).

Considering Claim 9: Swarup et al. teaches alkyd resin having a number average molecular weight of from 500 to 20,000 (13:35-42).

Considering Claim 10: Swarup et al. teaches an embodiment with 75% solids content (7:4-6).

Considering Claims 11-13: Swarup et al. teaches the polyester being a reaction product of a aliphatic polyol and a acid that is preferably phthalic anhydride, isophthlaic acid, succinic acid, or adipic acid (13:43-52).

Considering Claims 14 and 15: Swarup et al. teaches the diols as being a mixture (11:65-66) of neopentyl glycol and trimethylol propane (11:66-12:13).

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Considering Claim 16: Swarup et al. teaches the fatty acid as coming from animal or vegetable fats or oils/being naturally occurring (13:57).

Considering Claims 17 and 18: Swarup et al. teaches the fatty acid as being selected from palmitic, lauric, stearic, capric, caprylic, or myristic acid or mixtures thereof (13:60-65).

Considering Claims 21-23: Swarup et al. teaches amino crosslinker as being melamine formaldehyde (4:50-60) and being present in an amount of 5 to 55 weight percent (4:14-19).

Considering Claim 24: Swarup et al. teaches the composition as comprising a mixture of an alkyd resin and an epoxy component as the polyol of the composition (Claim 18).

Considering Claim 25: Swarup et al. teaches the composition as comprising a solvent that can be a ketone, xylene or an alcohol (15:66-16:17).

Considering Claim 27: Swarup et al. teaches the composition as comprising BYK 301 and 302/silicone resins as flow control agents (17:59).

Considering Claim 28: Swarup et al. teaches an acid catalyst that is p-toluene sulfonic acid or dodecylbenzene sulfonic acid (17:1-10).

Claims 31-37, 39, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swarup et al. (US Pat. 6,087,464).

Considering Claims 31-33: Swarup et al. teaches a coating composition (2:15-18) comprising an alkyd resin with a polydispersity of greater than 1/less than 2 (11:34-41) that is the reaction product of a polyester component (13:38-42) and a fatty acid component (13:53-65) that is preferably saturated (13:65-67). Swarup et al. teaches the polyester being a reaction product of an aliphatic polyol and an acid that is preferably phthalic anhydride, isophthalic acid, succinic acid, or adipic acid (13:43-52) and the alkyd resin having a number average molecular weight of from 500 to 20,000 (13:35-42).

Swarup et al. teaches a polydispersity greater than 1. This overlaps with the claimed range of less than about 2. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a *prima facie* case of obviousness exists. *In*

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re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2144.05.

Considering Claims 34 and 35: Swarup et al. teaches the diols as being a mixture (11:65-66) of neopentyl glycol and trimethylol propane (11:66-12:13).

Considering Claims 36 and 37: Swarup et al. teaches the fatty acid as being selected from palmitic, lauric, stearic, carpic, carpylic, or mystetric acid or mixtures thereof (13:60-65).

Considering Claim 39: Swarup et al. also teaches composition as having a low viscosity (6:13-36).

Swarup et al. does not teach the alkyd resin having the claimed viscosity. However, "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). As viscosity controls the processability of a coating, it is recognized in the art as a result effective variable. It would have been obvious to a person having ordinary skill in the art at the time of invention to have to have optimized the viscosity through routine optimization, and the motivation to do so would have been, as Swarup et al. suggests, to provide a high solids content coating with low VOC (6:27-36). However, changes such as the viscosity may impart patentability to a composition if the particular viscosity claimed produces a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. *In re Boesch and Slaney*, 2003 USPQ 215 (CCPA 1980).

Considering Claim 40: Swarup et al. teaches an embodiment with 75% solids content (7:4-6).

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swarup et al. (US Pat. 6,087,464).

Considering Claim 41: Swarup et al. teaches a steel panel/metal substrate coated with a a coating composition (2:15-18) comprising an alkyd resin with a polydispersity of greater than 1/less than 2 (11:34-41) that is the reaction product of a polyester component (13:38-42) and a fatty acid component (13:53-65) that is preferably

saturated (13:65-67); and a amino resin crosslinker (14:34-39). Swarup et al. also teaches the composition as having low discoloration/being substantially color stable (10:18-20). Swarup et al. also teaches the alkyd resin as having a number average molecular weight of from 500 to 20,000 (13:35-42).

Swarup et al. teaches a polydispersity greater than 1. This overlaps with the claimed range of less than about 2. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP § 2144.05.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swarup et al. (US Pat. 6,087,464) as applied to claim 1 above, and further in view of Sodhi (US Pat. 5,269,839).

Considering Claims 19 and 20: Swarup et al. teaches the composition of claim 1 as shown above.

Swarup et al. does not teach the acid number as being as claimed. However, Sodhi teaches an alkyd resin for coatings that has an acid number of between 5 and 10 (2:29-43). Swarup et al. and Sodhi are analogous art as they are concerned with the same field of endeavor, namely alkyd resin coatings. It would have been obvious to a person having ordinary skill in the art at the time of invention to have used an alkyd resin with the acid number of Sodhi in the coating of Swarup et al., and the motivation to do so would have been, as Sodhi suggests to provide a clear resin (1:23).

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swarup et al. (US Pat. 6,087,464) as applied to claim 1 above, and further in view of Kuo et al. (US Pat. 2002/0147270).

Considering Claim 26: Swarup et al. teaches the composition of claim 1 as shown above. Swarup et al. also teaches adding a flow control agent to the composition (17:59).

Swarup et al. does not teach the composition as comprising a wax. However, Kuo et al. teaches adding a polyolefin/polyethylene wax (§0070) to an alkyd resin coating (abstract). Swarup et al. and Hall are analogous art as they are concerned with the same field of endeavor, namely alkyd resin coatings. It would have been obvious to a person having ordinary skill in the art at the time of invention to have added the wax of Kuo et al. to the coating of Swarup et al., and the motivation to do so would have been, as Kuo et al. suggests, polyolefin waxes are well known flow control agents (§0070).

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swarup et al. (US Pat. 6,087,464) as applied to claim 31 above, and further in view of Sodhi (US Pat. 5,269,839).

Considering Claim 38: Swarup et al. teaches the composition of claim 31 as shown above.

Swarup et al. does not teach the acid number as being as claimed. However, Sodhi teaches an alkyd resin for coatings that has an acid number of between 5 and 10 (2:29-43). Swarup et al. and Sodhi are analogous art as they are concerned with the same field of endeavor, namely alkyd resin coatings. It would have been obvious to a person having ordinary skill in the art at the time of invention to have used an alkyd resin with the acid number of Sodhi in the coating of Swarup et al., and the motivation to do so would have been, as Sodhi suggests, the low acid value shows that the reaction between the polyester and the fatty acid has gone to completions (2:29-43).

Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swarup et al. (US Pat. 6,087,464) as applied to claim 31 above.

Considering Claim 39: Swarup et al. teaches the composition of claim 31 as shown above. Swarup et al. also teaches composition as having a low viscosity (6:13-36).

Swarup et al. does not teach the alkyd resin having the claimed viscosity. However, "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). As viscosity controls the

processability of a coating, it is recognized in the art as a result effective variable. It would have been obvious to a person having ordinary skill in the art at the time of invention to have to have optimized the viscosity through routine optimization, and the motivation to do so would have been, as Swarup et al. suggests, to provide a high solids content coating with low VOC (6:27-36). However, changes such as the viscosity may impart patentability to a composition if the particular viscosity claimed produces a new and unexpected result which is different in kind and not merely in degree from the results of the prior art. In re Boesch and Slaney, 2003 USPQ 215 (CCPA 1980).

Response to Arguments

Applicant's arguments filed January 15, 2009 have been fully considered but they are not persuasive, because:

A) Applicants argument that Swarup et al. does not teach a polydispersity of less than 2 is not persuasive. In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). See MPEP § 2144.05. As the polydispersity disclosed by Swarup et al. overlaps with the claimed range, as discussed above, it would have been *prima facie* obvious to a person having ordinary skill in the art at the time of invention to have chosen the overlapping portion of the range disclosed by Swarup et al.

Applicants reliance on Vareckova et al. to show that a person having ordinary skill in the art at the time of invention would not expect a alkyd resin to have a polydispersity below 2 is misplaced. Vareckova et al. provides a definition of alkyd resin that is distinct from the definition relied upon by both the original specificalton and Swarup et al. Vareckova et al. defines alkyd resins are requiring polyols having at least three hydroxyl groups (introduction). The original specification states that the polyol component can be mono-, di-, or tri-funtional, with several difunctional polyols being listed in the preferred embodiments (¶0015). Swarup et al. lists difunctional polyols as the preferred polyols for the alkyd resin formation (13:36-42). As evidenced by the

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applicant's admission (pgs. 5-6), the polydispersity of alkyd can be reduced by avoiding the use of trifunctional and higher-functional polyols. As Vareckova et al. requires higher functional polyols, its teaching regarding the polydispersity are inherently skewed towards higher polydispersity resins. As such, the teachings are not sufficient to show that a person having ordinary skill in the art at the time of invention would not expect alkyd polymers to have polydispersities lower than 2.

Additionally, it is noted that the criticality of the claimed polydispersity has not been established. While the original specification contains a broad teaching that the polydispersity can preferably be less than 2 (¶0021), the original specification provides no experimental data or teachings on how to obtain this property. The only example of an alkyd resin (Example 1), and in this example the polydispersity is not measured or disclosed. Additionally, the original specification provides no teaches on the production of the alkyd resin in the detailed description beyond the basic well known production methods. Therefore, should the applicant provide evidence to show that a person having ordinary skill in the art at the time of invention would not expect alkyd resins to have polydispersity in the claimed range, a person having ordinary skill in the art at the time of invention would not have been enabled by the original specification to achieve this property.

Applicants argument that polydispersity has not been established as a result effective variable is not persuasive. The obviousness of the claimed range is based on the overlap of the claimed range and the disclosed range. See MPEP § 2144.05 I. The precedent that the applicant is relying on deals with situations where the reference teaches a range outside the claimed range. In *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) the reference was silent towards the claimed parameter. In *Ex parte Whalen*, 89 USPQ2d 1078 (BAPI, 2008) the disclosed viscosity in the reference is less than half of the claimed viscosity. As these cases differ from the instant application, in that Swarup et al. explicitly suggests using the claimed range, they are not germane. The applicant can rebut a presumption of obviousness based on a claimed invention that falls within a prior art range by showing "(1) [t]hat the prior art taught away from the claimed invention...or (2) that there are new and unexpected results relative to the prior

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art.” *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1322, 73 USPQ2d 1225, 1228 (Fed. Cir. 2004). See MPEP § 2144.05.

B) In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). While Kuo et al. does not teach all the claimed limitations, this does not detract from its teaching that disclosed waxes are known viscosity control agents in alkyd resin coatings.

C) The applicant's argument that Swarup et al. does not refer to the viscosity of the alkyd resin is not persuasive. While the cited teaching of Swarup et al. does refer to the viscosity of the coating as a whole, a person having ordinary skill in the art at the time of invention would understand that the viscosity of the coating would be directly influenced by the component parts. Therefore, a person having ordinary skill in the art at the time of invention would have modified the viscosities of the three components to affect the viscosity of the coating composition.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liam J. Heincer whose telephone number is 571-270-3297. The examiner can normally be reached on Monday thru Friday 7:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harold Y Pyon/
Supervisory Patent Examiner, Art
Unit 1796

LJH
April 9, 2009